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(54) Title: NON-BACTERIAL CLONING IN DELIVERY AND EXPRESSION OF NUCLEIC ACIDS

## (57) Abstract

Novel double-stranded DNAs, expression vectors and methods for their use are provided in which the intracellular expression of the double-stranded DNAs alters the phenotype of a cell to determine the function of a gene of interest. The double-stranded DNAs encode a family of catalytic RNAs targeted to the mRNA of a gene of interest. Cleavage of the mRNA results in an altered cell phenotype from which the function of the product encoded by the mRNA is determined. The compositions find use in high-throughput screens to assign gene functions which eliminate the requirement of bacterial cloning.